

REMARKS

Favorable reconsideration of this application, in light of the following discussion and in view of the present amendment, is respectfully requested.

Claims 1, 19, 23 and 24 are amended. Claims 1-24 are pending.

Entry of Amendment under 37 C.F.R. § 1.116

The Applicant requests entry of this Rule 116 Response because: the amendments were not earlier presented because the Applicant believed in good faith that the cited references did not disclose the present invention as previously claimed; and the amendment does not significantly alter the scope of the claim and places the application at least into a better form for purposes of appeal.

The Manual of Patent Examining Procedures (M.P.E.P.) sets forth in Section 714.12 that “any amendment that would place the case either in condition for allowance or in better form for appeal may be entered.” Moreover, Section 714.13 sets forth that “the Proposed Amendment should be given sufficient consideration to determine whether the claims are in condition for allowance and/or whether the issues on appeal are simplified.” The M.P.E.P. further articulates that the reason for any non-entry should be explained expressly in the Advisory Action.

I. Rejection under 35 U.S.C. § 112

In the Office Action, at page 4, numbered paragraph 8, claims 1-12, 19 and 21 were rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. This rejection is respectfully traversed.

At paragraph 0038, lines 1-4, for example, particularly recite that “[t]he control unit determines whether a detergent used is a powdered detergent or liquid detergent depending on a corresponding one selected by the user among the buttons, such as the powdered detergent washing course button 31a and the liquid detergent washing course button 31b.” Thus, claims 1-12 and 19-21 do particularly comply with the written description requirement as the written description clearly states that the control unit determines whether the detergent is powdered or liquid. Accordingly, withdrawal of the § 112, first paragraph, rejection is respectfully requested.

In the Office Action, at page 5, numbered paragraph 10, claims 1-12, 19 and 21 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which application regards as the invention.

Claims 1 and 19 were amended in accordance with the Examiner's comments, and accordingly, withdrawal of the § 112, second paragraph, rejection is respectfully requested.

II. Rejections under 35 U.S.C. § 102

In the Office Action, at page 5, numbered paragraph 12, claims 23 and 24 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,870,906 to Pastryk et al. Please note that U.S. Patent No. 5,870,906 is correctly cited to Denisar. However, in light of the Examiner's comments, a response was made to the U.S. Patent No. 4,986,093 Pastryk reference.

This rejection is respectfully traversed because Pastryk does not discuss or suggest "an input unit receiving an input from a user;...and a control unit causing a pump to dissolve a detergent contained in the water tub in response to a determination by the control unit, based on the input, that the detergent is powdered, and then causing the spraying unit to spray the detergent into the rotary tub by the spraying unit to soak a center of a laundry load," as recited in independent claim 23. Further, Pastryk does not discuss or suggest "a control unit causing a first type of detergent to be dissolved in the detergent feed unit before being fed from the water tub to the rotary tub, and a second type of detergent to be fed from the water tub to the rotary tub without being dissolved in the detergent feed unit," as recited in independent claim 24.

Pastryk does not suggest the use of a control unit that causes a pump to dissolve a detergent contained in a water tub in response to a determination by the control unit, based on the input, that the detergent is powdered. Pastryk does not suggest that a determination is made that the detergent is powdered and thus is not suggestive of a control unit causing a pump to dissolve detergent in a water tub, based on such a determination.

In addition, Pastryk does not discuss or suggest the use of a control unit that causes a first type of detergent to be dissolved before being fed to a rotary tub and causes a second type of detergent to be fed from the water tub to the rotary tub without being dissolved in a detergent feed unit. Pastryk includes no such distinction between types of detergent.

Therefore, as Pastryk does not discuss or suggest the features of independent claims 23 and 24, claims 23 and 24 patentably distinguish over the references relied upon. Accordingly, withdrawal of the § 102(b) rejection is respectfully requested.

In the Office Action, at page 6, numbered paragraph 13, claims 23 and 24 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,233,718 to Hardaway et al. This rejection is respectfully traversed because Hardaway does not discuss or suggest "an input

unit receiving an input from a user;... and a control unit causing a pump to dissolve a detergent contained in the water tub in response to a determination by the control unit, based on the input, that the detergent is powdered, and then causing the spraying unit to spray the detergent into the rotary tub by the spraying unit to soak a center of a laundry load," as recited in independent claim 23. Further, Hardaway does not discuss or suggest "a control unit causing a first type of detergent to be dissolved in the detergent feed unit before being fed from the water tub to the rotary tub, and a second type of detergent to be fed from the water tub to the rotary tub without being dissolved in the detergent feed unit," as recited in independent claim 24.

Hardaway does not suggest the use of a control unit that causes a pump to dissolve a detergent contained in a water tub in response to a determination by the control unit, based on the input, that the detergent is powdered. Hardaway does not suggest that a determination is made that the detergent is powdered and thus is not suggestive of a control unit causing a pump to dissolve detergent in a water tub, based on such a determination.

In addition, Hardaway does not discuss or suggest the use of a control unit that causes a first type of detergent to be dissolved before being fed to a rotary tub and causes a second type of detergent to be fed from the water tub to the rotary tub without being dissolved in a detergent feed unit. Hardaway includes no such distinction between types of detergent.

Therefore, as Hardaway does not discuss or suggest the features of independent claims 23 and 24, claims 23 and 24 patentably distinguish over the references relied upon. Accordingly, withdrawal of the § 102(b) rejection is respectfully requested.

III. Rejections under 35 U.S.C. § 103

In the Office Action, at page 7 and 10, numbered paragraphs 17 and 19, claims 1-6, 9, 12 and 19-21 were rejected under 35 U.S.C. §103(a) as being unpatentable over Pastryk or Hardaway in view of either U.S. Patent No. 5,438,507 to Kim et al. or U.S. Patent No. 5,140,842 to Kiuchi et al. This rejection is respectfully traversed because the combination of the teachings of Pastryk or Hardaway in view of Kim or Kiuchi does not suggest:

a control unit determining whether a detergent used is a powdered detergent or a liquid detergent; and

a detergent feed unit to feed the detergent contained in the water tub into the rotary tub through the detergent feed pipe, the detergent feed unit dissolving the detergent before feeding the detergent into the rotary tub in response to a determination from the control unit that the detergent is a powdered detergent,

as recited in independent claim 1.

Pastryk and Hardaway disclose washing machines that include a control system, plural detergent supplies and the use of either powdered or liquid detergent. However, as conceded by the Examiner, Pastryk and Hardaway do not discuss or suggest a control unit determining whether a detergent used is a liquid or powdered detergent. Thus, Pastryk and Hardaway do not suggest that a detergent feed unit dissolves detergent before feeding the detergent into the rotary tub in response to a determination from the control unit that the detergent is a powdered detergent. The Examiner indicates that Kim or Kiuchi make up for the deficiencies in Pastryk and Hardaway. The Applicants respectfully disagree.

Kim discusses a method of and apparatus for controlling a washing operation of a washer in which a type of detergent to be used is determined in terms of the detergent manufacturer so as to determine the amount of detergent to be used. By analyzing turbidity data, various information required to control the washer, such as a washing time, a detergent amount, and a water flow intensity, are determined. Kim further discusses in the Background that turbidity data is used to make a determination between a liquid detergent and a powder detergent.

However, Kim does not discuss or suggest that a detergent feed unit dissolves detergent before feeding the detergent into a rotary tub in response to a determination from the control unit that the detergent is a powdered detergent. While Kim discusses that a determination may be made as to what type of detergent is being used, Kim includes no discussion at all of a result obtained from such a determination being used to cause a detergent feed unit to dissolve the detergent before feeding the detergent into the rotary tub.

Kiuchi discusses a washing machine having an optical sensor to detect the light permeability of the detergent solution in order to determine whether the detergent is liquid or powdery. Also, Kiuchi discusses that a control unit controls washing or rinsing operations in accordance with the judged type. However, Kiuchi does not discuss or suggest that the control unit causes the detergent feed unit to dissolve the detergent, based on the determination. Specifically, Kiuchi discusses that the only operations that are controlled based on the determination as to whether the detergent is liquid or powdered are washing and rinsing operations. Kiuchi includes no discussion of the control unit controlling any other operation than washing or rinsing based on such a determination. Thus, for example, Kiuchi does not discuss or suggest that a detergent feed unit dissolves the detergent before feeding the detergent into the rotary tub in response to a determination from the control unit that the detergent is a powdered detergent. Kiuchi is entirely silent as to such an operation.

Further, even the combination of the teachings of Pastryk/Hardaway and Kim/Kiuchi is not suggestive of a detergent feed unit dissolving detergent before feeding the detergent into a rotary tub in response to a determination from the control unit that the detergent is a powdered detergent. In Pastryk, for example, liquid or granular detergent is stored in dispenser 54. Water may be caused to flow into the detergent dispenser 54, which causes the detergent to be flushed through the openings 130 into a space between the basket 25 and tub 24 and to flow down into the sump area 80 in the tub 24. Similarly to Pastryk, in Hardaway, the detergent (either liquid or granular) is stored in dispenser 64, and the detergent is not dissolved when the water is fed into the dispenser 64. However, Pastryk does not discuss or suggest that the detergent in the detergent dispenser 54 is dissolved.

Further, even if the methods of Kim or Kiuchi were incorporated into Pastryk or Hardaway, there is no indication as to how or why Pastryk or Hardaway would cause the detergent that is determined to be, for example, powdered, to be dissolved by a detergent feed unit before being fed into the rotary tub. Causing water to flow into a detergent dispenser is not dissolving the detergent. In order for the detergent to be entirely dissolved, a pump must be operated, as in element 106 of Fig. 3 of the present invention. Merely providing the detergent or adding water to the detergent is not causing the detergent to dissolve and further is not causing the detergent to dissolve based on a determination as to the type of detergent being used.

In addition, whether the detergent type is liquid or is powdered is irrelevant with respect to the Pastryk and Hardaway references. In Pastryk, and similarly in Hardaway, water is fed into the detergent dispenser 54, the detergent is flushed into the sump area 80 in the tub 24 and the mixing tank 70 is filled with a concentrated solution of water and detergent. Water is then admitted to partially fill the mixing tank 70 and the pump 28 is operated to draw the concentrated solution from the mixing tank, through the pump 28 and return it to the mixing tank to mix the detergent. However, if the detergent is determined to be liquid or if the detergent is determined to be powdered is entirely irrelevant for the Pastryk and Hardaway references and there is no indication that a different course of action would be taken if the detergent was powdered or if the detergent was liquid, with respect to the dissolution of or non-dissolution of the detergent, prior to feeding such detergent into the rotary tub. Thus, even incorporating the determination as to whether detergent is liquid or powdered still does not meet the feature of a detergent feed unit which “dissolv[es] the detergent before feeding the detergent into the rotary tub in response to a determination from the control unit that the detergent is a powdered detergent.” Even if Pastryk or Hardaway included a control unit that made such a determination,

Pastryk and Hardaway would still not include a detergent feed unit that dissolves detergent before feeding the detergent into the rotary tub in response to a determination that the detergent is a powdered detergent. There is no indication that including distinguishing between types of detergent (i.e., liquid or powdered) would result in different courses of action to be taken, dependent on the distinguishment, i.e., dissolving the detergent or not dissolving the detergent before feeding the detergent into the rotary tub.

Further, the motivation cited of "selecting desired detergent type based on load type" does not explain why one of ordinary skill in the art would have been led to combine the teachings of Pastryk or Hardaway with Kim or Kiuchi. It is unclear as to why one would select powdered or liquid detergent based on the type of load and how exactly that would have led one of ordinary skill in the art to incorporate the detergent determining into the washing machines of Pastryk or Hardaway. As explained above, neither Pastryk nor Hardaway suggest that a control unit makes a distinction between types of detergent. Additionally, Kim and Kiuchi does not suggest that a control unit dissolves or does not dissolve a detergent based on the type of detergent that is involved before feeding the detergent into the rotary tub. As neither reference includes a distinction as to a course of action to be taken dependent on the type of detergent involved, it is unclear as to how combining the teachings of Pastryk or Hardaway with Kim or Kiuchi would be suggestive of the features of independent claim 1, for example. It is unclear as to how "selecting desired detergent type based on load type [sic]" would suggest dissolving detergent before feeding the detergent into a rotary tub in response to a determination from the control unit that the detergent is a powdered detergent. None of the references discuss dissolving powdered detergent in response to a determination from a control unit based on an input from an input unit. Further, it is respectfully requested that the Examiner provide support for types of detergent, i.e., liquid or powdered, being based on the load type as it is unclear that liquid or powdered detergent are particularly selected to achieve different results dependent on load type.

Therefore, as the combination of the teachings of Pastryk or Hardaway and Kim or Kiuchi does not suggest "a control unit determining whether a detergent used is a powdered detergent or a liquid detergent; and a detergent feed unit to feed the detergent contained in the water tub into the rotary tub through the detergent feed pipe, the detergent feed unit dissolving the detergent before feeding the detergent into the rotary tub in response to a determination from the control unit that the detergent is a powdered detergent," as recited in independent claim 1,

claim 1 patentably distinguishes over the references relied upon. Accordingly, withdrawal of the §103(a) rejection is respectfully requested.

Also, the combination of the teachings of Pastryk or Hardaway and Kim or Kiuchi does not suggest “a control unit determining whether a detergent used is a powdered detergent or a liquid detergent; and a detergent feed unit to feed the detergent contained in the water tub into the rotary tub, the control unit causing the detergent feed unit to dissolve the detergent before feeding the detergent into the rotary tub in response to a determination from the control unit that the detergent is a powdered detergent,” as recited in independent claim 19, claim 19 patentably distinguishes over the references relied upon. Accordingly, withdrawal of the §103(a) rejection is respectfully requested.

Claims 2-6, 9, 12, 20 and 21 depend either directly or indirectly from independent claims 1 and 19 and include all of the features of their respective independent claims, plus additional features that are not discussed or suggested by the reference relied upon. For example, claim 3 recites, “a spray nozzle provided at the second end of the detergent feed pipe to spray the detergent into the rotary tub.” Therefore, claims 2-6, 9, 12, 20 and 21 patentably distinguish over the reference relied upon for at least the reasons noted above. Accordingly, withdrawal of the § 102(b) rejection is respectfully requested.

In the Office Action, at pages 9-10, numbered paragraphs 18 and 20, claims 7, 8, 10 and 11 were rejected under 35 U.S.C. §103(a) as being unpatentable over various combinations of Pastryk, Hardaway, Kim, Kiuchi, U.S. Patent No. 2003/0208855 to McAllister et al. and U.S. Patent No. 5,870,906 to Denisar. These rejections are respectfully traversed.

As discussed above with respect to independent claim 1, neither Pastryk nor Hardaway discusses or suggests all the features of independent claim 1. McAllister fails to make up for the deficiencies in Pastryk or Hardaway. Therefore, independent claim 1 patentably distinguishes over the reference relied upon. Claims 7, 8, 10 and 11 depend either directly or indirectly from independent claim 1 and include all the features of claim 1, plus additional features that are not discussed or suggested by the references relied upon. For example, claim 7 recites, “a motor to rotate the rotary tub in opposite directions, wherein the control unit controls the motor to rotate the rotary tub after feeding the set amount of water into the water tub.” Therefore, claims 7, 8, 10 and 11 patentably distinguish over the references relied upon for at least the reasons noted above. Accordingly, withdrawal of the § 103(a) rejection is respectfully requested.

Conclusion

In accordance with the foregoing, claims 1, 19, 23 and 24 have been amended. Claims 1-24 are pending and under consideration.

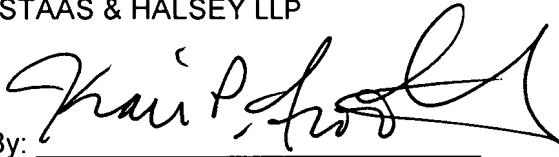
There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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By: 

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